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dispersion caused by the prism **320a** substantially compensates the chromatic dispersion caused by the prism **320b** at predetermined design wavelengths. An image merging element based on achromatic prisms may be constructed, as shown in FIG. **21b**.

The display unit **100a**, **100b** may be implemented using any suitable display technology, for example reflective, emissive or transmissive light modulating array. The display unit **100a**, **100b** may be based on light emitting diodes (LED or Organic Light Emitting Diode), micromechanical mirrors (also known as a DMD display, digital micromirror device, or MEMS display) or an array of liquid crystal cells. The image shifting element **301a**, **301b** may also be implemented using one or more diffractive gratings.

The display device **500** may be a mobile phone, a communicator or a personal digital assistant (PDA) device, for example. The display device **500** may be an electronic book. The device **500** may comprise wireless communication capabilities. The device **500** may comprise means to connect to the internet.

The display device **500** may be assembled using separate devices. E.g. two mobile phones may be positioned adjacent to each other, and separate primary images **10a**, **10b** displayed by the display units of said phones may be merged together using an image merging element **300**.

For any person skilled in the art, it will be clear that modifications and variations of the devices and the method according to the present invention are perceivable. The particular embodiments described above with reference to the accompanying drawings are illustrative only and not meant to limit the scope of the invention, which is defined by the appended claims.

What is claimed is:

1. A display device for displaying an image, comprising at least:

a first display unit of a first width having a first active region to display a first primary image,
a second display unit of a second width having a second active region to display a second primary image, said second active region and first active region being adjacent to each other but having a gap between them, and
an image merging element adapted to form a first secondary image based on said first primary image and a second secondary image based on said second primary image,

wherein said image merging element comprises at least a first image shifting element of a third width adapted to shift and/or bend paths of light rays originating from said first primary image substantially in a first direction only in order to change a visual distance between said first secondary image and said second secondary image wherein said image merging element further comprises a second image shifting element of a fourth width adapted to shift paths of light rays originating from said second primary image substantially in a second direction only in order to change the visual distance between said first secondary image and said second secondary image, said second direction being substantially opposite to said first direction wherein a sum of the first width and the second width is greater than a sum of the third width and the fourth width so as to make the image merging element foldable between the first display unit and the second display unit in moving to a closed state from a viewing state in which the image merging element, the first display unit and the second display unit are arranged in a triangular configuration, wherein the triangular configuration comprising a first side is the first display unit, a second side is the second display unit, and a third side is the image merging element.

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2. The display device according to claim 1, wherein an area of the first image shifting element is at least 51% of an entire area of the first active region, and an area of the second image shifting element is at least 51% of an entire area of the second active region.

3. The display device according to claim 1, wherein local optical magnification provided by said first image shifting element is substantially constant over the area of said first image shifting element.

4. The display device according to claim 1, wherein a degree of shifting, bending, or both, caused by the image shifting element is substantially constant over the area of said first image shifting element.

5. The display device according to claim 1, wherein said first image shifting element is implemented using a plurality of substantially linear and parallel prisms.

6. The display device according to claim 5, wherein said first image shifting element is a micropism sheet.

7. The display device according to claim 5, wherein prism angles of said prisms are substantially equal.

8. The display device according to claim 1, wherein said image merging element is flexible.

9. The display device according to claim 8, wherein said image merging element is adapted to be held in planar form by a tensioning force.

10. The display device according to claim 1, wherein said device is a foldable device.

11. The display device according to claim 10, wherein an angular intensity distribution of light transmitted by said first display unit is optimized according to a predetermined viewing direction.

12. The display device according to claim 10, wherein an angular intensity distribution of light transmitted by said first display unit is adapted to be adjusted according to an angle between said first display unit and said second display unit.

13. The display device according to claim 1, wherein a distance between said first primary image and said second primary image is adjustable.

14. The display device according to claim 1, wherein an angle between said first display unit and said second display unit is substantially smaller than one hundred and eighty degrees.

15. The display device according to claim 1, wherein said device further comprises a third display unit comprising a third active region to display a third primary image.

16. A mobile device comprising a display device for displaying an image, said display device in turn comprising at least:

a first display unit of a first width having a first active region to display a first primary image,

a second display unit of a second width having a second active region to display a second primary image, said second active region and first active region being adjacent to each other but having a gap between them, and
an image merging element adapted to form a first secondary image based on said first primary image and a second secondary image based on said second primary image,

wherein said image merging element comprises at least a first image shifting element adapted to shift, or to bend, or to both shift and bend paths of light rays originating from said first primary image substantially in a first direction only in order to change a visual distance between said first secondary image and said second secondary image, and

a second image shifting element of a fourth width adapted to shift, or to bend, or to both shift and bend paths of light rays originating from said second primary image sub-